

PTO/SB/08A (10-01)

Approved for use through 10/31/2002. OMB 0651-0031  
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE  
is not required to respond to a collection of information unless it displays a valid OMB

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Substitute for form 1449A/PTO				Complete if Known	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(use as many sheets as necessary)</i>				Application Number	
				Filing Date	
				First Named Inventor	Philip E. MAY
				Art Unit	
				Examiner Name	
Sheet	1	of	1	Attorney Docket Number	CML00770D

## **U.S. PATENT DOCUMENTS**

## **FOREIGN PATENT DOCUMENTS**

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

**Applicant's unique citation designation number (optional).** <sup>2</sup>See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 804-04.

<sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>5</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>6</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>7</sup>Applicant is to place a check mark here if English language Translation is attached.

document under WIPO Standard ST. 16 if possible. Applicant is to place a check mark here if English language Translation is attached.  
**Burden Hour Statement:** This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



PTO/SB/08B (10-01)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Substitute for form 1449B/PTO				<b>Complete If Known</b>	
				Application Number	10/652,134
				Filing Date	3/29/2003
				First Named Inventor	May et al.
				Art Unit	2185
				Examiner Name	Daniel H. Pan
Sheet	1	of	1	Attorney Docket Number	CML00770D

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
<i>M</i>		LAM, M., Software Pipelining: An Effective Scheduling Technique for VLIW Machines, Proceedings of the SIGPLAN '88 Conference on Programming Language Design and Implementation, Atlanta, Georgia, June 22-24, 1988, pp. 318-328	
<i>H</i>		LEE, T. et al., A Transformation-Based Method for Loop Folding, IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, Vol. 13, No. 4, April 1994, pp. 439-450	
<i>H</i>		KAVI, K.M. et al., A Formal Definition of Data Flow Graph Models, IEEE Transactions on Computers, Vol C-35, No. 11, Nov 1986, pp. 940-948	
<i>H</i>		COOPER, K.D. et al., Efficient Computation of Flow Insensitive Interprocedural Summary Information, SIGPLAN Notices, Vol. 19, No. 6, June 1984, pp. 247-258	
<i>H</i>		STRONG, H.R., Vector Execution of Flow Graphs, Journal of the Association for Computing Machinery, Vol 39, No. 1, January 1983, pp. 186-196	
<i>H</i>		AIKEN, A. et al., Resource-Constrained Software Pipelining, IEEE Transactions on Parallel and Distributed Systems, Vol. 6, No. 12, December 1995, pp. 1248-1270	
<i>H</i>		WULF, WILLIAM A. "Evaluation of the WM Architecture," Proceedings of the 19 <sup>th</sup> Annual International Symposium on Computer Architecture: 1992, pp. 382-390, ACM 0-89791-509-7/92/0005/0382.	
<i>H</i>		TALLA, D., Architectural techniques to Accelerate Multimedia Applications on General-Purpose Processors, Dissertation, August 2001, pp. 94-125	
<i>H</i>		TALLA, D., Bottlenecks in Multimedia Processing with SIMD Style Extensions and Architectural Enhancements, IEEE Transactions of Computers, August 2003, pp. 1015-1031, Vol. 62, No. 8, IEEE	

Examiner Signature	<i>SWJ</i>	Date Considered	<i>5/20/03</i>
--------------------	------------	-----------------	----------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231



PTO/SB/08A (10-01)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office, U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Substitute for form 1449A/PTO

### INFORMATION DISCLOSURE STATEMENT BY APPLICANT

*(use as many sheets as necessary)*

Sheet

1

of

2

**Complete If Known**

Application Number	10/652,134
Filing Date	3/29/2003
First Named Inventor	May et al.
Art Unit	2185
Examiner Name	Daniel H. Pan
Attorney Docket Number	CML00770D

**U.S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code <sup>2</sup> (if known)			
✓		3,718,912	Feb-73	Hasbrouck et al.	
✓		4,128,880	Dec-78	Cray Jr.	
✓		4,744,043	May-88	Kloker	
✓		4,760,545	Jul-88	Inagami et al.	
✓		4,807,183	Feb-89	Kung et al.	
✓		4,825,361	Apr-89	Ormoda et al.	
✓		4,918,600	Apr-90	Harper et al.	
✓		5,206,822	Apr-93	Taylor	
✓		5,390,352	Feb-95	Kinoshita	
✓		5,450,607	Sep-95	Kowalczyk et al.	
✓		5,495,617	Feb-96	Yamada	
✓		5,652,909	Jul-97	Kodosky	
✓		5,734,863	Mar-98	Kodosky et al.	
✓		5,805,614	Sep-98	Norris	
✓		5,821,934	Oct-98	Kodosky et al.	
✓		5,881,257	Mar-99	Glass et al.	
✓		5,881,263	Mar-99	York et al.	
✓		5,936,953	Aug-99	Simmons	
✓		5,966,528	Oct-99	Wilkinson et al.	
✓		5,969,975	Oct-99	Glass et al.	
✓		5,999,736	Dec-99	Gupta et al.	
✓		6,052,766	Apr-00	Betker et al.	
✓		6,064,819	May-00	Franssen et al.	
✓		6,128,775	Oct-00	Chow et al.	
✓		6,192,384	Feb-01	Daily et al.	
✓		6,437,804	Aug-02	Ibe et al.	

**FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>4</sup>
		Country Code <sup>3</sup> - Number <sup>4</sup> - Kind Code <sup>5</sup> (if known)				

Examiner Signature

Date Considered

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 809. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 801.04.

<sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 18 if possible. <sup>6</sup>Applicant is to place a check mark here if English language Translation is attached.

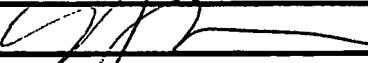
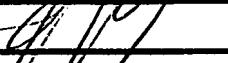
Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Substitute for form 1449A/PTO				Complete If Known	
				Application Number	10/652,134
				Filing Date	3/29/2003
				First Named Inventor	May et al.
				Art Unit	2185
				Examiner Name	Daniel H. Pan
Sheet	2	of	2	Attorney Docket Number	CML00770D

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code <sup>3</sup> (if known)			
51		5,697,788	Dec-97	Ohta	
51		5,717,947	Dec-98	Gallup et al.	
51		5,719,998	Feb-98	Ku et al.	
51		5,764,787	Jun-98	Nickerson	
51		5,887,183	Mar-99	Agarwal et al.	
51		6,202,130	Mar-01	Scales et al.	
51		6,381,687	Mar-01	Sandstrom et al.	
51		6,430,671	Aug-02	Smith	
51		6,513,107	Jan-03	Ansan	
51		6,588,009	Jul-03	Guffens et al.	
51		6,598,221	Jul-03	Pegatoquet et al.	
51		6,629,123	Sep-03	Hunt	
51		6,647,546	Nov-03	Hinken et al.	
51		6,665,749	Dec-03	Ansan	
51		6,732,354	May-04	Ebeling et al.	
51		6,745,160	Jun-04	Ashar et al.	
51		6,795,908	Sep-04	Lee et al.	
51		6,898,691	Mar-05	Blomgren et al.	
51		20020080795	June-02	Van Wageningen et al.	
51		20020112228	Aug-02	Granston et al.	
51		20020120923	Aug-02	Granston et al.	
51		20030128712	Jul-03	Moriwaki et al.	
51		20040003206	Jan-04	May et al.	
51		20040117595	Jun-04	Norris	
51		20050053012	Mar-05	Moyer	
51		20050055534	Mar-05	Moyer	
51		20050055543	Mar-05	Moyer	
608					

FOREIGN PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Country Code <sup>2</sup> - Number <sup>3</sup> - Kind Code <sup>3</sup> (if known)			

Examiner Signature		Date Considered	
--------------------	---	-----------------	---

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04.

<sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 18 if possible. <sup>6</sup>Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



PTO/SB/08A (10-01)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

**Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.**

Substitute for form 1449A/PTO				<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(use as many sheets as necessary)</i>				Application Number	10/652,134
				Filing Date	3/29/2003
				First Named Inventor	May et al.
				Art Unit	2185
				Examiner Name	Daniel H. Pan
Sheet	1	of	1	Attorney Docket Number	CML00770D

U.S. PATENT DOCUMENTS

## FOREIGN PATENT DOCUMENTS

FOREIGN PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Country Code <sup>3</sup> - Number <sup>4</sup> - Kind Code <sup>5</sup> (If known)			

**\*EXAMINER:** Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

**Applicant's unique citation designation number (optional).** See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04.

<sup>4</sup>Enter Office that issued the document by the two-letter code (WIPO Standard ST 3). <sup>5</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>6</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST 16 if possible. <sup>7</sup>Applicant is to place a check mark here if English language Translation is attached.

document under WIPO Standard ST. 16 if possible. Applicant is to place a check mark here if English language Translation is attached.  
**Burden Hour Statement:** This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

*TDS 06/19/07*

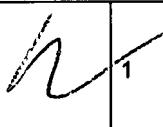
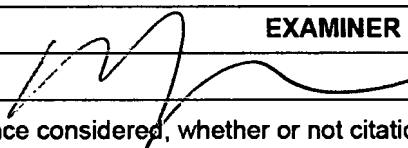
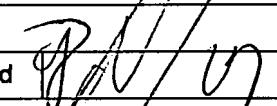
**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**  
*( Not for submission under 37 CFR 1.99)*

Application Number	10652134
Filing Date	2003-08-29
First Named Inventor	MAY, Philip E.
Art Unit	2183
Examiner Name	PAN, Daniel H.
Attorney Docket Number	CML00770D

U.S.PATENTS							<input type="button" value="Remove"/>	
Examiner Initial*	Cite No	Patent Number	Kind Code <sup>1</sup>	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear		
	1							
If you wish to add additional U.S. Patent citation information please click the Add button.							<input type="button" value="Add"/>	
U.S.PATENT APPLICATION PUBLICATIONS							<input type="button" value="Remove"/>	
Examiner Initial*	Cite No	Publication Number	Kind Code <sup>1</sup>	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear		
	1							
If you wish to add additional U.S. Published Application citation information please click the Add button.							<input type="button" value="Add"/>	
FOREIGN PATENT DOCUMENTS							<input type="button" value="Remove"/>	
Examiner Initial*	Cite No	Foreign Document Number <sup>3</sup>	Country Code <sup>2</sup>	Kind Code <sup>4</sup>	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	T <sup>5</sup>
	1							<input type="checkbox"/>
If you wish to add additional Foreign Patent Document citation information please click the Add button							<input type="button" value="Add"/>	
NON-PATENT LITERATURE DOCUMENTS							<input type="button" value="Remove"/>	
Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.						T <sup>5</sup>

*(See next pg)*

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <small>( Not for submission under 37 CFR 1.99)</small>	Application Number	10652134
	Filing Date	2003-08-29
	First Named Inventor	MAY, Philip E.
	Art Unit	2183
	Examiner Name	PAN, Daniel H.
	Attorney Docket Number	CML00770D

	1	HENNESSY and PATTERSON, "Computer Architecture A Quantitative Approach, 1996, Morgan Kaufman Publishers, Inc., Second Edition, pages 239 - 247.	<input type="checkbox"/>
If you wish to add additional non-patent literature document citation information please click the Add button <input type="button" value="Add"/>			
<b>EXAMINER SIGNATURE</b>			
Examiner Signature			Date Considered 
<p>*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</p> <p><small><sup>1</sup> See Kind Codes of USPTO Patent Documents at <a href="http://www.USPTO.GOV">www.USPTO.GOV</a> or MPEP 901.04. <sup>2</sup> Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>3</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>4</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>5</sup> Applicant is to place a check mark here if English language translation is attached.</small></p>			

*IDS 06/19/07*